PROPERTY PLANNING COMMON ELEMENTS

COMPONENTS OF MASTER PLANS

HABITATS AND THEIR MANAGEMENT

Impacts of Habitat Management Practices

This analysis describes the general environmental impacts and outcomes of the habitat management practices commonly applied on DNR properties.

Impacts to Natural Resources

Soils

Many common habitat management practices have the potential to physically impact soils, particularly those that routinely cause soil exposure and disturbance. These include forest management practices, where the construction of roads, skid trails, landings, and water crossings and the use of heavy equipment are necessary for timber harvesting or other management actions (e.g., site preparation, tree planting), as well as farming practices that include soil tilling, crop planting, and the use of heavy equipment. Pesticide treatments have the potential to cause soil contamination when applied in areas with exposed soil.

The probability of significant short-term or long-term cumulative impacts due to soil erosion is low. This is due to the relatively small percentage of land on a given property or within a plan area that is disturbed by management activities at any given time. Soil erosion during timber harvesting operations will be minimized by the use of the Best Management Practices (BMPs) for Water Quality guidelines. BMPs contain strict standards for road construction, water crossings, skid trails and logging landings. All trails and primitive roads will be monitored for signs of excessive soil erosion caused by management activities, in which case actions will be taken (e.g., BMPs or trail closings) to minimize the erosion potential. Soil erosion on any lands managed with farming practices will be minimized or eliminated by crop residues and unharvested areas, the use of cover crops and other BMPs (e.g., grass buffers), or the eventual restoration of the area to a permanent cover type. Potential soil impacts from pesticide treatments will be minimized by integrating pesticide treatments with other management actions to help achieve resource management objectives, thus reducing the amount of pesticides needed, and by following all policies and procedures described in the Pesticide Use Manual Code (4230.1), which includes certification/licensing, training, approval, and reporting requirements for safe and effective pesticide use.

Geological Resources and Landforms

Many DNR properties contain, and protect, rare or unique geological resources and landforms (e.g., Niagara escarpment, glacial landforms, Driftless Area topographical features, etc.).

Surface mining on DNR lands is largely restricted to the establishment of small quarries or pits used to extract material (sand or gravel) for use in construction projects on the property, or per s.23.20, Wisconsin Statutes, in the local township or county. These small facilities will have minimal impacts and must be sited, operated, and, when no longer needed, reclaimed according to applicable county/local zoning regulations, reclamation requirements under Chapter NR 135, Wisconsin Administrative Code, and all required permits.

Air Quality

Impacts to air quality from habitat management practices would primarily come from prescribed fire. Prescribed burns are conducted seasonally (typically spring and fall) on a variety of grassland, wetland, and savanna/barrens habitats on DNR lands. Prescribed burns may be conducted on the same property every year, but the area burned will typically be rotated between different management units, thereby minimizing impacts on any one area of a property. Prescribed burns are of short duration (less than one day). Burn plans, prepared for each prescribed burn, contain BMPs and procedures to safely manage the fire, including measures to minimize nuisance smoke impacts. Local landowners and units of government will be notified prior to prescribed burns.

Impacts on air quality from fugitive dust particles and engine exhaust emissions from equipment used in construction of roads for forest management will be small and transitory in nature. When construction is complete, no residual impacts to air quality will be detectable.

Vehicle emissions generated by DNR motor vehicles and management activities such as timber harvesting or mowing, will be less than or comparable to adjacent roadways and similar activities (e.g., forest management, agriculture) in the local area.

Water Resources

Sanitary Systems and Vault Toilets

Any septic systems, drywells, or other wastewater disposal systems encountered as part of any future real estate transactions will be appropriately abandoned. This will have the effect of safeguarding groundwater quality.

Springs and Seeps

State ownership and management helps to safeguard water quality and biological diversity of springs and seeps. BMPs for protecting water quality during habitat management activities will be implemented around all springs and seeps.

Surface Waters and Wetlands

Habitat management practices that disturb/expose or contaminate soil and lead to sediment-laden runoff into surface waters and wetlands have the potential to affect water quality, particularly when conducted in or adjacent to such water features. These practices include forest management activities, farming practices, and pesticide treatments. As with soil resources, maintaining permanent vegetative cover and following BMPs during management activities will have an overall positive impact on surface waters and wetlands. The impacts of stormwater runoff during timber harvesting will be mitigated by implementing appropriate BMPs described in the "Wisconsin's Forestry Best Management Practices for Water Quality" field manual, which are part of every timber harvest on DNR properties. These BMPs have been shown to be an effective means of protecting water quality during forest management activities. Runoff impacts from lands managed with farming practices will be minimized or eliminated by crop residues and unharvested areas, the use of cover crops and other BMPs (e.g., grass buffers), or the eventual restoration of the area to a permanent cover type. Potential water quality impacts from pesticide treatments will be minimized by integrating pesticide treatments with other management actions to help achieve resource management objectives, thereby reducing the amount of pesticides needed, and by following all policies and procedures described in the Pesticide Use Manual Code (4230.1), which includes certification/licensing, training, approval, and reporting requirements for safe and effective pesticide use.

Biotic Resources

Habitat management on DNR lands is planned as part of an integrated, ecosystem management approach. This approach involves assessing resources (natural communities, habitats, aquatic features, etc.), and the opportunity and responsibility to protect and manage them, at multiple scales (global, continental, regional, and local), while considering socio-economic and recreational factors and desired benefits, in order to identify the best places in the state to manage for different resources.

It is a fundamental principle of land management that any management practice applied at a given site will benefit or favor certain species of plants and animals over others. However, the ecosystem management planning approach helps ensure that management actions for different resources are applied to places best suited to sustain those resources. This results in management effort being focused strategically and efficiently to provide desired ecological conditions, economic products, and social benefits where opportunity and suitability are maximized, rather than managing for "a little bit of everything, everywhere".

Commonly employed habitat management practices on DNR lands are expected to have positive long-term impacts on vegetation and natural communities, resident and migratory wildlife and fisheries, and endangered, threatened, and rare species. While some practices (e.g., clearcut harvest, prescribed burn, drawdown) may have short-term effects on habitat quality or availability, commonly employed seasonal restrictions and BMPs will minimize these effects, and there will be significant medium- and long-term benefits. Habitat management activities are intended to maintain or enhance the quality and extent of native and restored habitats, thereby improving the population status of both game and nongame species. Planned changes to vegetation composition and structure will generally occur slowly and gradually, over several to many decades, and will be heavily influenced by natural succession in many cases.

DNR policies addressing the monitoring, inspection, and control of invasive species will be followed. Control measures appropriate to the species will be used. These may include mechanical control, pesticide treatments, use of biological agents, and prescribed fire. These actions are expected to have positive impacts, including maintenance of native biotic communities and protection from future invasions.

Impacts to Recreational Facilities and Opportunities

Visual/Scenic Resources

Changes in the visual qualities and aesthetics of plant communities will occur over time as sites are managed to meet objectives specified in the master plan. These changes will be most noticeable where practices that more significantly alter plant structure and composition are used (e.g., clearcut, coppice, seed tree harvests, prescribed burns, complete waterbody drawdowns), particularly where these practices occur near higher-use recreational facilities or areas. Impacts typically are of short duration and will be the greatest immediately after the practice occurs. Effects will diminish over time as plant succession occurs or when the practice is reversed (as in the case of a drawdown). Leaving residual trees, using strips of screening vegetation, seasonal restrictions, or educational/interpretive signage are ways of mitigating visual impacts of habitat management practices.

Recreational Use

Commonly employed land management practices on DNR lands will have an overall positive effect on recreational use by protecting, maintaining, and enhancing native habitats and wildlife populations. Some short-term impacts

to recreational use may occur where roads, trails, or other areas are temporarily closed to public access during certain management activities (e.g., timber harvest, prescribed burn, waterbody drawdown). Heavy equipment use may generate some noise impacts for recreational users in adjacent areas. These impacts are generally of short duration and are mitigated by the fact that many habitat management practices occur during non-peak times of year, thereby substantially reducing potential conflicts with recreational users.

Impacts to Cultural Resources

Many DNR properties contain archaeological and historic resources, including both Native American and Euro-American sites. State ownership serves to protect and preserve these cultural resources, and provides educational and interpretive opportunities for the visiting public. Many other sites likely remain to be discovered, and cultural resource investigations are ongoing across the state. Habitat management activities that cause ground disturbance (e.g., forest management, farming practices) are the most likely to impact cultural resources. In accordance with s. 44.40, Wisconsin Statutes and DNR Manual Code 1810.10, any activity with potential to disturb cultural sites will only be undertaken after consultation with the DNR Archaeologist. Any additional sites identified with cultural or historical value will be managed in accordance with DNR policies and statutory requirements.

Socio-economic Impacts

Timber Products

Timber production as part of sustainable forest management is a primary purpose of State Forests and is an important management tool for meeting a variety of habitat objectives on other DNR properties. While not a primary purpose on every property, timber production has value and provides multiple benefits, including employment in forest-based industries, revenues for the department, and habitat improvement. Commercial timber harvests will continue to be an integral part of habitat management on many DNR properties, generating positive socio-economic benefits.

Infrastructure and Transportation

Habitat management activities on DNR lands are expected to have minimal if any impacts on infrastructure and transportation. A slight increase in heavy equipment traffic may be noted while timber sale contracts are being executed or farming practices implemented. The presence of logging trucks or agricultural vehicles on local roads is not unusual in many parts of the state.

Noise

from Most habitat management activities on DNR lands are anticipated to have minimal noise impacts on property neighbors and users. Noises associated with habitat management activities may temporarily impact wildlife use patterns. Noise impacts will primarily be generated from practices that employ heavy equipment (forest management practices, farming practices, mowing, etc.). Such noise will be generated by chainsaws, skidders, tractors, mowers, and trucks. These noises will occur primarily during daylight hours and will be peak (high level, short duration) rather than continuous in nature. The noise often will be seasonal and transient (i.e., once the activity is completed the noise source will be eliminated).

Public Safety

Habitat management activities on DNR lands are not expected to have any negative public safety impacts. All such activities, particularly the most potentially hazardous to public safety (prescribed fire, pesticide treatments), are conducted according to DNR policies, which contain strict safety procedures.

Economic Effects and Their Significance

Habitat management on DNR lands largely impacts local or regional economies indirectly, by influencing recreational resources and activities that draw visitors to DNR properties. This visitation can have a range of economic impacts (see the Impacts Associated with Outdoor Recreation Common Element).

Forest management on DNR lands contributes to the local logging industry. Timber harvests contribute to the local supply of wood products and add to the local economy through payments to contractors, wages to laborers in the field, and primary and secondary forest products industries. Other management activities (e.g., grazing, haying, share-cropping) that are implemented through contracts with local producers contribute similarly to the local economy.

Cumulative Effects, Risk, and Precedent

Cumulative Effects

Habitat management activities on DNR lands are anticipated to have overall positive long-term effects on the quality of the natural environment and on recreational users. Anticipated cumulative benefits include: improved habitat for game and non-game species, including endangered, threatened, and special concern species; protection of unique or important natural or biological features such as cliffs, glades, springs, fish spawning areas, reptile and bat hibernacula, etc.; and increased use of sustainable forestry practices.

Risk

Habitat management on DNR lands poses an overall low potential for risk to the environment. Many habitat management practices have been implemented on DNR properties for years or decades, and these practices typically have fewer negative and more positive environmental impacts than surrounding residential or agricultural lands. Only a small percentage of any property is actively managed (e.g., timber harvests or prescribed fire) in a given year.

The presence of motor vehicles and other equipment used in habitat management may pose a slight but insignificant risk from spills and erosion. Such risks are mitigated by use of best management practice requirements and pre-management meetings with contractors.

Practices such as prescribed fire and pesticide treatments are implemented according to DNR policies and procedures, which include strict safety precautions. Burning restrictions, including a complete burning ban, are put into effect during periods of high fire danger. Pesticide use strictly follows label instructions to protect the environment and human safety.

Precedent

Implementation of common habitat management practices on DNR lands is not considered precedent-setting, primarily because these practices are not unique and occur regularly on DNR properties across the state.

Degree and Nature of Conflict Associated with Habitat Management Practices

Habitat management on DNR lands can generate conflicts and disagreements among different groups of users and stakeholders. Public involvement is a key component of master planning and is integrated throughout the entire process. By design, the master planning process provides an open forum for the full spectrum of public opinion, encouraging advocates, neutral parties, and opponents alike to express their perspectives, and hopefully facilitating better understanding of one another's viewpoints.

Some habitat management activities generate more conflict than others and may become controversial. Practices more likely to attract opposition include those that are perceived as having negative environmental impacts (e.g., early-successional forest management practices perceived as negatively impacting habitat for mature-forest species), aesthetic impacts (e.g., clearcut harvest), or public health and safety risk (e.g., prescribed fire or pesticide treatments). Some practices, like prescribed burning, may be perceived as having impacts in all these categories.

In cases where existing or proposed habitat management practices are controversial, the department still must decide what practices should or should not be implemented, considering all public input, as well as the relevant physical and biological characteristics and ecological and socio-economic contexts of the property, in its decision. As such, the resulting outcomes are likely to satisfy some and disappoint others.